

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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| In the Matter of |) | |
| |) | |
| NUCLEAR ENERGY INSTITUTE |) | |
| and |) | WT 09-176 |
| UTILITIES TELECOM COUNCIL |) | |
| |) | |
| Request for Waiver to Permit the Use of |) | |
| Two-Way Wireless Headsets and Intercom |) | |
| Devices Inside Nuclear Power Plants |) | |

COMMENTS OF AMEREN SERVICES COMPANY

Ameren Services Company, by counsel and pursuant to the Commission’s Public Notice, DA 09-2171 (rel. Oct. 5, 2009), hereby respectfully submits comments in support of the “Request for Waiver to Permit the Use of Two-Way Wireless Headsets and Intercom Devices Inside Nuclear Power Plants,” filed by the Nuclear Energy Institute (NEI) and Utilities Telecom Council (UTC) on September 23, 2009 (the “Petition”). The Petition seeks waiver of the Commission’s rules to allow the operation inside nuclear power plants of certain intercom and headset equipment manufactured by Telex Communications, Inc. (“Telex”) under Part 90 of the Commission’s Rules. Ameren also supports, and joins, in the request made in the Petition for expedited action by the Commission regarding the waiver request; indeed, Ameren may be the first entity harmed if the Commission fails to take the requested action.

I. Introduction

Ameren Services Company is the service subsidiary of Ameren Corporation, supporting the operations of four electric utilities: Union Electric Company d/b/a AmerenUE, Central Illinois Light Company d/b/a AmerenCILCO, Illinois Power

Company d/b/a AmerenIP, and Central Illinois Public Service Company d/b/a AmerenCILCO (collectively, "Ameren").¹ Ameren provides electric power service to over 2.4 million customers throughout a 64,000 square mile service territory in Missouri and Illinois. *See* Ameren Fact Sheet.

Twenty percent of AmerenUE's power is generated by the Callaway Plant, a nuclear power generating station located near Fulton, Missouri. *See* <http://www.ameren.com/callaway>. The Callaway Plant has a generating capacity of 1,190 megawatts and produces sufficient power each year to meet the electricity needs of approximately 780,000 households. *Id.*

The Callaway Plant has operated safely since its inception in 1984. *Id.* The Callaway Plant's safety record is due in large part to its 1,000 skilled workers and their ability to use the best equipment available that is best suited to their tasks. With regard to coordinated operations during refueling outages at the Callaway Plant, Ameren absolutely relies upon communications equipment manufactured by Telex.

Ameren is authorized under call sign WE2XHS to operate nine Telex BTR-700/800 base stations and associated equipment.² Ameren's license to use this equipment was last issued on an experimental basis, and expires in February of 2010. Ameren never has received any interference complaint occasioned by its use of the Telex equipment. *See* Hamilton Declaration, ¶ 11. This is due in part to the fact that the equipment is used inside the thick, concrete walls of the nuclear facility, and because the equipment is operated at or below 100mW. *Id.* Further, the Callaway Plant is well-isolated, and

¹ *See* http://www.ameren.com/AboutUs/ADC_AU_FactSheet.pdf ("Ameren Fact Sheet").

² In support of these Comments, Ameren incorporates the testimony of its FCC License Coordinator Richard A. Hamilton, whose declaration is attached hereto as Exhibit A ("Hamilton Declaration").

maintains an Exclusion Area, *i.e.*, a 1200 meter, or nearly three-quarters of a mile, buffer that prohibits any other entity from existing in the area. *Id.*

Only Telex equipment provides Ameren with the all of the following benefits: hands-free operation, full duplex operation, resistance to multipath interference, support for multiple base units, ease of use, durability and reliability.

Accordingly, Ameren supports the Petition filed by UTC and NEI, both of which include Ameren as a member, to permit rule waiver to allow nuclear plants like the Callaway Plant to continue use of Telex equipment after the experimental license for same expires in February of 2010. Moreover, Ameren urges the Commission to take expedited action so that Ameren, which faces a refueling outage in April of 2010, may have confirmation of continued, authorized use of Telex equipment prior to that time.

II. Ameren Urges FCC to Take Expedited Action.

NEI and UTC have asked that the Commission take, pursuant to 47 C.F.R. § 1.925(b)(4), expedited action on their request for rule waiver. To date, the Commission has not indicated it intends to take expedited action.³ Ameren implores the FCC to take action immediately to grant the Petition, and to do so before the end of 2009.

A mandatory refueling is scheduled for Ameren's Callaway Plant in Spring 2010, where the use of Telex equipment will be essential. Thus, Ameren, perhaps more so than any other entity, will be harmed either by the Commission's failure to grant the Petition, or its failure to act on the Petition, by the end of the year.

³ NEI and UTC's request for a rule waiver asked the Commission for expedited treatment "in order that necessary plant outage and worker protection planning may be undertaken" and asked that the Commission grant the requested waiver by October 1, 2009. *See* NEI and UTC Petition for Waiver, ET 05-345, at 1, n. 2 (filed July 16, 2009). In its revised Petition, NEI and UTC again asked for waiver to be granted by October 1, 2009. *See* Petition at 1, n. 2. The FCC, which did not place the first NEI/UTC request for waiver on Public Notice, placed the revised Petition on Public Notice on October 5, 2009, with comments due by October 26, 2009 and reply comments due by November 5, 2009.

The Petition notes that use of Telex equipment is “most essential during an outage, which occurs every 18-24 months and generally lasts 37-40 days, during which one or more of the reactors at a given time are shut down.” Petition at 9. These outages are scheduled based upon the needs of the reactor, and cannot be delayed or rescheduled. In Ameren’s case, the Callaway Plant is scheduled for a mandatory refueling in early April, 2010. Hamilton Declaration, ¶ 17. Thus, for several weeks, the facility will be shut down so that Ameren workers may undertake numerous tasks, including removal of irradiated fuel from the nuclear reactor core and installation of fresh fuel.

As set forth below, Ameren believes Telex equipment offers its employees the best communications tool for this critical task. Thus, Ameren asks that the Commission grant the waiver requested in the Petition. Almost as important, however, is that the Commission take action—any action—soon. If the Commission denies the Petition, or takes no action, Ameren will be forced to scramble to find some patchwork of communications equipment that can serve some of the many functions the Telex equipment provides during outage operations. Given the complexity of Ameren’s communications system at Callaway and the need to test a new solution, a decision must be known no later than the end of 2009.

Any failure by the FCC to act presents Ameren with two poor options. First, Ameren could consider operating its Telex system without a valid license—in open violation of the Commission’s Rules. Ameren cannot knowingly take this course. Second, Ameren could consider assembling equipment that (as noted below, Ameren knows) will be a poor replacement for the Telex equipment and will subject Ameren employees to an unnecessary level of risk.

A better course, therefore, is for the Commission to grant the expedited treatment requested, and to grant the Petition, by the end of the year. That action alone will best protect Ameren workers.

III. Callaway Plant Safety Demands Reliable Communications.

Ameren prides itself on its safety record, including at the Callaway Plant. The use of Telex equipment is critical in maintaining employee safety at the nuclear facility, especially during critical outages where the Telex equipment's dexterity is essential.

Over 1000 Ameren employees and contractors support the operations of the Callaway Plant. Hamilton Declaration, ¶ 6. Over the course of the last 25 years, these men and women have made the Callaway Plant not only one of the safest nuclear power plants, but one of the safest workplaces, in the country. Indeed, in 2006, Ameren and its employees were awarded the Edison Electric Institute (EEI) Safety Achievement Award for outstanding worker safety. *Id.* The award was in recognition of Ameren employees working nearly five million hours without any accidents that resulted in a lost work day.

The EEI Safety Achievement Award was given for workplace safety during the period of March 2004 through October 2006, during which Ameren employees undertook, with the help of Telex equipment, complicated refueling and maintenance outages. The use of Telex equipment was vital in performing these operations safely.

During these outages, Ameren employees must work in or near the Callaway Plant's nuclear core and other hazardous areas. *Id.*, ¶ 8. Because of the proximity to radioactive material, Ameren must strictly limit worker exposure to radiation. This task is undertaken by Ameren health physics employees who monitor employee exposure

levels and help to control employee movements in and around the hazardous material. *Id.* This is capable through communications via Telex equipment.

While the Ameren workers are monitored, they are tasked with a variety of complex and hazardous tasks, including the removal of spent fuel, and the installation of new fuel. This task is undertaken by a team of crane operators, signalmen, engineers, and a variety of supporting personnel, as well as the health safety team. All of these employees communicate via Telex equipment.

Telex equipment allows these Ameren workers absolutely reliable, interference-free communications and the ability to converse in all directions, *i.e.*, in full duplex. Further, workers in and around the core are able to converse via Telex headsets so that their hands are free and they are able to communicate without need to press buttons.

IV. Unique Features of Telex Equipment.

In prior iterations of the Petition, commenting parties have claimed that nuclear power plant operators have at their disposal a variety of commercial alternatives to Telex equipment. The National Association of Broadcasters (“NAB”), for example, claimed: “publicly available information proves that there are a number of hands-free, secure systems being sold right now that would satisfy the industry’s desired specifications.” Joint Comments of the Association for Maximum Service Television, Inc. and the National Association of Broadcasters, ET Docket No. 05-345, at 4 (filed Jan. 17, 2006).

The NAB’s comments, however, appear limited to a review of products on the market, and did not include testing in a nuclear plant setting. Further, they failed to understand the myriad factors that make Telex equipment essential.

The empirical testing that does exist, and that was undertaken by operators of nuclear power plants—at the power plants themselves—illustrates that there is no commercial alternative. The Petition notes, for example, that nuclear plant operators were nearly unanimous when polled as to whether Telex equipment was superior to other available products. *See* Petition at 8, 18-19. Ameren confirms this is the case.

Ameren has spent considerable time and resources investigating several different wireless systems to determine if those systems could, whether operating alone or in conjunction with other new equipment, satisfy the requirements of Ameren during an outage. In each case, the alternative system was deemed unable to fill the performance and reliability Ameren experiences with Telex equipment. Hamilton Declaration, ¶ 15.

In the attached Hamilton Declaration, Ameren’s FCC License Coordinator notes in detail the features of the Telex equipment that make it so indispensable to Ameren and its workers. Although certain features of the Telex equipment are found in a few different licensed and unlicensed FCC devices, no single product provides Ameren with all of these features, including: (a) Hands Free Operation; (b) Full Duplex Operation; (c) Resistance to Multipath; (d) Support for Multiple Bases; (e) Ease of Use; and (f) Durability/Reliability. *Id.*, ¶ 12.

Even if Ameren operated multiple systems to attempt to replicate operations achievable with the Telex equipment, no matter the number of systems employed, it would be impossible to replace all communications features available from the Telex equipment. *Id.*, ¶ 16. Further, Ameren is aware that a combination of products—not intended to operate in concert—would be more expensive, more prone to failure, and more complicated to operate for workers than the current Telex equipment.

V. Waiver is Merited.

The Commission has wide latitude in granting relief pursuant to 47 C.F.R. § 1.925(b)(3)(i) and (ii). Ameren submits that waiver is appropriate because of the “unique or unusual circumstances of the instant case,” and the fact that application of the Commission’s rules would be both “burdensome” and “contrary to the public interest,” and because nuclear power operators like Ameren have “no reasonable alternative” to use of Telex equipment. *Id.* at § 1.925(b)(3)(ii).

Nuclear power stations are, themselves, unique. Their special status was recognized by the Executive Branch in Executive Order 13010, where such facilities were determined to be a part of the nation’s critical infrastructure that is “so vital that their incapacity...would have a debilitating impact on the defense or economic security of the United States.”⁴ The Commission should not in this case treat nuclear plants as it would other types of facilities, including factories, warehouses, or other industrial campuses. As noted above, operation of Telex equipment at nuclear facilities will not cause radio interference to other users because these facilities are: (1) operated in remote areas; (2) surrounded by large buffers, and (3) constructed in such a way that radio interference is negligible beyond the plant’s perimeter.

To satisfy the Commission’s rules, Ameren would be required to scrap its extensive Telex network, and seek a patchwork of existing equipment to attempt to replicate the performance offered by the Telex equipment. The cost of this, as well as the likelihood of complications with trying to establish such a network, would be burdensome, and would not result in the same level of safety as that which Ameren currently enjoys with the use of the Telex equipment. Indeed, in light of the testing

⁴ Exec. Order No. 13,010, 61 Fed. Reg. 37,347 (Jul. 15, 1996).

Ameren has undertaken, which determined that no alternative would provide Ameren a suitable replacement for the Telex equipment, Ameren believes it has no reasonable alternative to use of the Telex equipment.

As the Petition notes, the Commission has in the past granted similar waivers. *See* Petition at 19-22 and the cases cited therein. It should do so again here, on a permanent basis. Use of Telex equipment within the confines of nuclear facilities poses no real specter of interference to other spectrum users, and is an appropriate and limited remedy necessary to address a unique problem.

VI. Conclusion

The Commission should grant the Petition and allow a waiver of its rules to allow nuclear power operators permanent, but limited, use of Telex equipment. A rule waiver best protects worker and plant safety, and is overwhelmingly in the public interest.

The Commission must act quickly. Ameren needs certainty, soon, that it will be able to use Telex equipment at refueling operations scheduled this Spring. Thus, Ameren asks the Commission to grant the requested relief before the end of the year.

Respectfully submitted,



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Counsel to Ameren Services Company

Dated: October 26, 2009

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| Intercom Devices Inside Nuclear Power |) | |
| Plants |) | |

DECLARATION OF RICHARD A. HAMILTON

I, Richard A. Hamilton, attest as follows:

Background

1. I am the FCC License Coordinator for Ameren Services Company.¹ As the FCC License Coordinator, I am tasked with oversight of all FCC licenses held by the Ameren companies, as well as for the oversight of the licensed wireless communications network used by these companies, including those discussed herein. I have worked for Ameren, and its predecessor Union Electric, for over 23 years.

2. I hold bachelor and advanced degrees in Electrical Engineering from Saint Louis University (B.S.E.E., 1970) and Southern Illinois University – Edwardsville (M.S.E.E., 1983), respectively. I have held an FCC Radiotelephone Operator License, First Class, from 1965 through 1984, and have held since 1984 an FCC General Radiotelephone Operator License.

¹ Ameren Services Company is the service subsidiary of Ameren Corporation, supporting the operations of four electric utilities: Union Electric Company d/b/a AmerenUE, Central Illinois Light Company d/b/a AmerenCILCO, Illinois Power Company d/b/a AmerenIP, and Central Illinois Public Service Company d/b/a AmerenCILCO (collectively, "Ameren").

3. Ameren provides electric power service to over 2.3 million customers throughout a 64,000 square mile service territory in Missouri and Illinois. Ameren's service territory is supported by a sprawling telecommunications network, which allows employees across the system to communicate effectively under all conditions and at all times.

Summary of Callaway Plant

4. Ameren's generation of electric service includes one nuclear power generating station, AmerenUE's Callaway Plant, which is located near Fulton, Missouri. The Callaway Plant has been operational since 1984, and has a generating capacity of 1,190 megawatts. The Callaway Plant generates enough power each year to meet the electricity needs of approximately 780,000 average households. The Callaway Plant accounts for nearly 20 percent of AmerenUE's total power generation. For more information, please see <http://www.ameren.com/callaway/>.

5. The Callaway Plant has operated safely since it began operations in 1984. This safety record is due in part to its construction—including four feet thick, steel reinforced concrete walls—which makes the facility impervious to natural and manmade hazards. It is also due in large part to the efforts of the Ameren employees who operate the facility.

6. The Callaway Plant is operated by over 1,000 Ameren employees and contractors. In 2006, those employees and Ameren were awarded the Edison Electric Institute (EEI) Safety Achievement Award for outstanding worker safety. The award recognized these Ameren employees for working nearly five million hours without any

accidents that resulted in a lost work day. This period, from March 2004 through October of 2006, also included complicated refueling and maintenance outages.

Communications Needs at Callaway Plant

7. As a vital part of its commitment to workplace and worker safety at the Callaway Plant, Ameren employs a complex communications system that allows workers to communicate with each other throughout the facility.

8. The most critical use of Ameren's communications system at the Callaway Plant occurs during outages. During these times, Ameren employees are required to work in or near the Callaway Plant's nuclear core and other hazardous areas. Because of the proximity to radiation, workers must be constantly monitored to reduce exposure to radiation. Thus, workers in this environment must be in communications not only with other employees performing outage functions, but they also must listen to health workers who are monitoring their radiation exposure, as measured by equipment attached to the employee.

9. Work performed in and around the Callaway Plant's nuclear reactor must be performed quickly, and without error, by a multitude of employees. Thus, the work requires absolutely reliable communications devices for these employees to communicate with one another. For Ameren, only wireless intercoms and supporting equipment manufactured by Telex provide the level of performance and reliability these situations demand.

Ameren's Use of Telex Equipment

10. Ameren is authorized under call sign WE2XHS to operate nine Telex BTR-700/800 base stations and associated equipment. Ameren's license to use this

equipment was last issued on an experimental basis, and expires in February of 2010.

The Telex equipment is primarily used during outages, including refueling of the nuclear core of the facility, which as noted below is scheduled after the expiration of the license, in April of 2010. Given the size of the Callaway Facility, and the number of employees involved in such outages, Ameren would ultimately like to increase its number of base stations to sixteen.

11. Ameren never has received an interference complaint occasioned by its use of the Telex equipment. Indeed, interference would be difficult to create; the equipment is operated at or below 100mW and used inside the four feet thick walls of the plant. The Callaway Plant also maintains an Exclusion Area, *i.e.*, a 1200 meter (nearly three quarters of a mile) prohibition on private tenancy.

Unique Features of Telex Equipment

12. Ameren has tested a variety of equipment, and has been active in its industry in researching alternatives to the Telex equipment. Ameren can state without equivocation that there is no solution on the market—at any price—that provides to Ameren the multiple operational and safety benefits that are offered by the Telex equipment. This unique combination of feature includes:

- (a) Hands-Free Operation. Often referred to as “Hot Mike” communication, the Telex equipment allows the ability to talk without depressing a microphone button. This hands-free operation is important in numerous instances where Ameren cannot allow communications delays, such as during the communication between a crane operator and a signalman, or in cases where it is undesirable for a worker to place his

hands near his face (for example, in the an area highly contaminated with radioactive material).

(b) Full Duplex Operation. The Telex equipment offers the ability of various Ameren workers on the talk channel to communicate at the same time. This is a primary consideration for communications needed during hazardous activities that affect safety (*i.e.*, nuclear safety, radiological safety, or personnel and industrial safety). Take, for example, a crane operator working with a signalman; the use of a wireless intercom greatly enhances the ability of the crane operator to operate the crane correctly, per the signalman's instructions. Full duplex communication, including the ability to talk over another user, is absolutely essential, especially in the case of an emergency. The delay that can be caused by simplex communications (typical of handheld radios) could result in serious injury or death to human beings, or serious damage to property. Each Telex base station allows up to four workers the ability to talk in full duplex. Further, base stations can be "ganged" together to provide talk groups that are larger than four.

(c) Resistance to Multipath. The Telex equipment is highly resistant to interference by other wireless equipment, including signal fade and flutter. This feature is an absolute requirement for Ameren's communications needs at the Callaway Plant.

(d) Support for Multiple Bases. The Telex equipment is versatile, and allows for flexible communications strategies. Each base station has

the ability to communicate with four “beltpacks.” Some base stations have two channels, A and B. By configuring the base stations with an audio matrix, numerous configurations are easily made. At the Callaway Plant, for example, the “Head Crew” is a team of workers working on the nuclear reactor head. The leads of the Head Crew normally communicate with their key people on channel A. When a highly complex and sensitive lift is being made with the polar crane (such as the lifting of a 230-ton reactor vessel head), whose operators are working on channel B, the system is configured so that the Head Crew personnel can instantaneously switch to channel B to be on the same talk channel as the polar crane operators. Thus, the load director is able to be in contact with the crane operator, signalman, spotters, load cell monitor, and others necessary to be involved with the lift.

(e) Ease of Use. Telex equipment is easy to use. In the case of the BTR-700 belt pack, an employee need only operate one knob and one pushbutton on the beltpack control. As a result, very little training and practice is necessary for Ameren employees to operate the equipment in a consistent and correct fashion.

(f) Durability/Reliability. The Telex BTR-700 / 800 beltpacks, which use a magnesium metal housing, have proven to be both durable and reliable.

No Alternatives Exist to Telex Equipment

13. AmerenUE has attempted over several years to identify a suitable alternative to replace the Telex equipment, and it has been unable to find any competitor product (either FCC Licensed or license free) that provides the breadth, depth, ease of use, and durability of the Telex equipment.

14. Ameren also is aware of the unsuccessful efforts of other users to replace Telex equipment. Ameren has reviewed information from these companies indicating that the main concern is that replacement systems, which operate appropriately outside of a reactor building, fail once inside the reactor building because of the unique nature of the reactor building's shape (round, metal lined, tightly enclosed space).

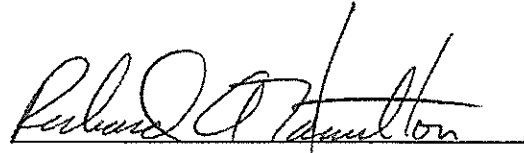
15. Ameren also has purchased several systems for testing at the Callaway Plant. In each case, the alternative systems have been deemed by Ameren as unable to meet all of the benefits noted above with regards to the Telex equipment.

16. As a result, Ameren has determined that it would be required to operate multiple systems to attempt to replicate operations achievable with only the Telex equipment. More importantly, however, Ameren also has concluded that, no matter the number of systems employed, it is impossible to replace all of its communication needs currently filled by the Telex equipment. Further, the cost of ownership, the complexity of integrating multiple systems and technologies, and the high chance for failure of the operation of such a hybrid communications system, all would be too great of a financial and operational risk for Ameren to undertake.

April Refueling

17. As noted above, Telex equipment is essential to Ameren during outages, including especially refueling of the Callaway Plant's core reactor. These refueling operations occur on average once every two years. The Callaway Plant's next refueling will occur in April 2010. Ameren has no viable alternative to use of Telex equipment at the April refueling.

I declare under penalty of perjury that the information and statements contained in this Declaration are true and correct to the best of my knowledge, recollection and belief.

A handwritten signature in black ink, appearing to read "Richard A. Hamilton", written over a horizontal line.

Richard A. Hamilton
Ameren Services Company

Dated: October 22, 2009